CLAIMS

What is claimed is:

1. A streaming media server for providing a plurality of media streams comprising:

a) a cue generator for receiving an event detected signal and configuration information and based thereon for generating a cue having a predefined structure; wherein the cue can be used by a stream processing application (SPA) to receive information concerning an event whose timing is important to the receiver.

2. The server of claim 1 wherein the cue includes one of program timing, program structure, program identity, start time of a media program, and stop time of a media program.

3. The server of claim 1 wherein the stream processing application (SPA) is a program recording application.

4. The server of claim 1 wherein the stream processing application (SPA) is a program insertion application.

5. The server of claim 1 wherein the stream processing application (SPA) is a program modification application.

6. The server of claim 1 wherein the stream processing application (SPA) is a program adaptation application.

7. The server of claim 1 wherein the stream processing application (SPA) is a program insertion application.

8. The server of claim 1 wherein the cue includes time sensitive program information.

9. The server of claim 1 wherein the cue includes a cue type that is one of an event notification cue, an event pending cue, an event termination cue, and an event continuing cue, and a user-defined custom cue.

10. The server of claim 1 wherein the predefined structure of the cue includes at least one of the following fields:

an event type field for specifying an event type;

a cue type field for specifying a cue type;

a version field for specifying a cue command protocol version;

a number field for specifying a number that in combination with the event type specified by the event type filed uniquely describes an event;

a duration field for specifying the time remaining before completion of a specified event;

a date field for specifying date information;

a time field for specifying time information;

a label byte count field for specifying the byte count in bytes of a subsequent variable-length text field; and

a variable-length label field for storing text suitable for display.

11. The server of claim 10 wherein the event type field is one of an advertisement event type, a video-frame event type, an interstice event type, an audio-track event type, an audio-segment event type, an video-segment event type cue, program-title event type, program-description event type, program-label event type, content-type event type, program-advisory, and user-defined event type.

12. The server of claim 10 wherein the date field includes data information encoded with a Society of Motion Picture and Television Engineer's (SMPTE) date encoding and wherein the time field includes time information encoded with a Society of Motion Picture and Television Engineer's (SMPTE) time encoding.

13. A method for delivering program timing, structure, and identity information in media streams comprising:

identifying an event in the media stream;

determining if the event is a structural point as defined by configuration information; and

generating a cue packet to represent the structural point.

14. The method of claim 13 wherein the step of generating a cue packet to represent the structural point includes one of

generating the cue packet automatically; and

generating the cue packet manually with a user-operated trigger.

15. The method of claim 13 further comprising:

receiving a packet;

determining whether the packet is a cue packet;

when the packet is a cue packet, then determining if the cue packet triggers an action based on predetermined configuration parameters;

when the cue packet triggers an action, using information from the cue packet to perform a function;

otherwise, discarding the cue packet.

16. A content distribution network comprising:

a media server for broadcasting at least one media stream having at least one structural point; and

a server-side cue handling mechanism for delivering program timing, structure, and identity information related to the media stream in the form of a cue packet.

17. The network of claim 16 further comprising:

a client-side cue handling mechanism for receiving packets, determining that a particular packet is a cue packet, and decoding program timing, structure, and identity information from the cue packet.

18. The network of claim 17 further comprising:

an application coupled to the client-side cue handling mechanism for using the program timing, structure, and identity information of the media stream to perform an application function.

19. The network of claim 17 further comprising:

an intermediary stream processing application for receiving the media stream, processing the media stream, and re-transmitting the media stream to one of other intermediary stream processing application and a client-side cue handling mechanism.

20. The network of claim 19 wherein processing the media stream includes processing at least one cue packet.

21. The network of claim 19 wherein re-transmitting the media stream to one of other intermediary stream processing application and receivers includes adding at least one cue packet to the media stream.

22. The network of claim 19 wherein re-transmitting the media stream to one of other intermediary stream processing application and receivers includes removing at least one cue packet to the media stream.